

² Television transmission in this band is not authorized and radio frequency channel widths shall not exceed 3.5 MHz.

³ Frequencies in this band are shared with fixed and mobile stations licensed in other services.

⁴ Frequencies in this band are shared with stations in the fixed-satellite service.

⁵ These frequencies are not available for assignment to mobile earth stations.

⁷ Frequencies in the band 2110-2120 MHz may be authorized on a case-by-case basis to Government or non-Government space research earth stations for telecommand purposes in connection with deep space research.

⁸ This frequency band is shared with station(s) in the Local Television Transmission Service and, in the U.S. Possessions in the Caribbean area, with stations in the International Fixed Public Radiocommunications Services.

⁹ The band segments 10.95-11.2 and 11.45-11.7 GHz are shared with space stations (space to earth) in the fixed-satellite service.

¹⁰ This band is co-equally shared with stations in the fixed services under Parts 21, 74, 78 and 94 of the Commission's Rules.

¹¹ Frequencies in this band are shared with Government stations.

¹² Assignments to common carriers in this band are normally made in the segments 21.2-21.8 GHz and 22.4-23.0 GHz and to operational fixed users in the segments 21.8-22.4 GHz and 23.0-23.6 GHz. Assignments may be made otherwise only upon a showing that no interference free frequencies are available in the appropriate band segments.

¹³ Frequencies in this band are shared with stations in the earth exploration satellite service (space to earth).

¹⁴ [Reserved]

¹⁵ Stations licensed as of September 9, 1963 to use frequencies in the 17.7-19.7 GHz band may, upon proper application, continue to be authorized for such operation.

¹⁶ Frequencies in this band are co-equally shared with stations in the Auxiliary Broadcasting (Part 74), Cable Television Relay (Part 78), Private Operational-Fixed Microwave (Part 94) and General Mobile Radio (Part 98) Services.

¹⁷ Frequencies in these bands are shared with Government fixed stations and sta-

§ 21.701 Frequencies.

(a) Frequencies in the following bands are available for assignment to fixed radio stations in the Point-to-Point Microwave Radio Service.

932.5-935 MHz ¹⁷	17,700-18,820 ^{5 10 16}
941.5-944 MHz ^{17 18}	18,920-19,160 ^{5 10 16}
2,110-2,130 MHz ^{1 3 7}	19,260-19,700 ^{5 10 16}
2,160-2,180 MHz ^{1 3 8}	21,200-22,000 MHz ^{4 11 13}
3,700-4,200 MHz ^{9 8}	¹³
10,550-10,585 MHz ¹⁴	22,000-23,600 MHz ^{4 11 13}
10,615-10,630 MHz ¹⁴	27,500-29,500 MHz ⁵
10,700-11,700 MHz ^{9 8}	31,000-31,300 MHz ¹⁶
13,200-13,250 MHz ⁴	38,800-40,000 MHz ⁴

ed, however, That waivers of this provision may be granted for good cause shown, including a showing that the proposed frequency usage is not likely to affect adversely the development of any major communications route; and *Provided further*, That such waivers will not be granted, absent a showing of compelling and unusual circumstances, for new stations or frequency paths (except for power splits of existing frequency paths) within fifty (50) miles of the coordinates of the principal city, as set forth in the U.S. Department of Commerce publication "Air Line Distance Between Cities in the United States," of one of the top 25 standard metropolitan statistical areas, as ranked by the U.S. Census

Transmit (receive) (MHz)	Receive (transmit) (MHz)
934.6250	943.6250
934.7250	943.7250

(4) 200 kHz channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
933.1750	942.1750
933.3750	942.3750
933.5750	942.5750
933.7750	942.7750
933.9750	942.9750
934.1750	943.1750
934.3750	943.3750



Transmit (receive) (MHz)	Receive (transmit) (MHz)
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0
18025.0	19585.0
18035.0	19595.0
18045.0	19605.0
18055.0	19615.0
18065.0	19625.0
18075.0	19635.0
18085.0	19645.0
18095.0	19655.0
18105.0	19665.0
18115.0	19675.0
18125.0	19685.0
18135.0	19695.0

340 MHz Separation

18585.0	19925.0
18595.0	19935.0
18605.0	19945.0
18615.0	19955.0
18625.0	19965.0
18635.0	19975.0
18645.0	19985.0
18655.0	19995.0
18665.0	20005.0
18675.0	20015.0
18685.0	20025.0
18695.0	20035.0
18705.0	20045.0
18715.0	20055.0
18725.0	20065.0
18735.0	20075.0
18745.0	20085.0
18755.0	20095.0
18765.0	20105.0
18775.0	20115.0
18785.0	20125.0
18795.0	20135.0
18805.0	20145.0
18815.0	20155.0

(5) 20 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17710.0	19270.0
17730.0	19290.0
17750.0	19310.0
17770.0	19330.0
17790.0	19350.0
17810.0	19370.0
17830.0	19390.0
17850.0	19410.0
17870.0	19430.0
17890.0	19450.0
17910.0	19470.0
17930.0	19490.0
17950.0	19510.0
17970.0	19530.0

Transmit (receive) (MHz)	Receive (transmit) (MHz)
17990.0	19550.0
18010.0	19570.0
18030.0	19590.0
18050.0	19610.0
18070.0	19630.0
18090.0	19650.0
18110.0	19670.0
18130.0	19690.0

340 MHz Separation

18590.0	19930.0
18610.0	19950.0
18630.0	19970.0
18650.0	19990.0
18670.0	20010.0
18690.0	20030.0
18710.0	20050.0
18730.0	20070.0
18750.0	20090.0
18770.0	20110.0
18790.0	20130.0
18810.0	20150.0

(6) 40 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17720.0	19280.0
17760.0	19320.0
17800.0	19360.0
17840.0	19400.0
17880.0	19440.0
17920.0	19480.0
17960.0	19520.0
18000.0	19560.0
18040.0	19600.0
18080.0	19640.0
18120.0	19680.0

(7) 80 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
1560 MHz Separation	
17740.0	19300.0
17820.0	19380.0
17900.0	19460.0
17980.0	19540.0
18060.0	19620.0

(8) 220 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
17810.0	18470.0
18030.0	19370.0
18250.0	19590.0

(f) Assignments in the band 38,600-40,000 MHz shall be according to the following frequency plan:

Channel group A		Channel group B	
Channel No.	Frequency band limits MHz	Channel No.	Frequency band limits MHz
1-A	38,600-38,650	1-B	39,300-39,350
2-A	38,650-38,700	2-B	39,350-39,400
3-A	38,700-38,750	3-B	39,400-39,450
4-A	38,750-38,800	4-B	39,450-39,500
5-A	38,800-38,850	5-B	39,500-39,550
6-A	38,850-38,900	6-B	39,550-39,600
7-A	38,900-38,950	7-B	39,600-39,650
8-A	38,950-39,000	8-B	39,650-39,700
9-A	39,000-39,050	9-B	39,700-39,750
10-A	39,050-39,100	10-B	39,750-39,800
11-A	39,100-39,150	11-B	39,800-39,850
12-A	39,150-39,200	12-B	39,850-39,900
13-A	39,200-39,250	13-B	39,900-39,950
14-A	39,250-39,300	14-B	39,950-40,000

These channels are assigned for use within a rectangular service area to be described in the application by the maximum and minimum latitudes and longitudes. Such service area shall be as small as practicable consistent with the local service requirements of the carrier. These frequency plans may be subdivided as desired by the licensee and used within the service area as desired without further authorization subject to the terms and conditions set forth in § 21.711. These frequencies shall be assigned only where it is shown that the applicant will have a reasonable projected requirement for a multiplicity of service points or transmission paths within the area.

(g) 31.0 to 31.3 GHz. These frequencies are shared on a co-equal basis with other stations in the fixed and mobile services (see Parts 21, 74, 94, and 95). No interference protection is afforded to fixed or mobile stations operating in this band.

(1) 25 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,012.5	31,162.5
31,037.5	31,187.5
31,062.5	31,212.5
31,087.5	31,237.5
31,112.5	31,262.5
31,137.5	31,287.5

(2) 50 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0	31,175.0
31,075.0	31,225.0
31,125.0	31,275.0

[44 FR 60534, Oct. 19, 1979, as amended at 46 FR 23453, Apr. 27, 1981; 48 FR 50331, Nov. 1, 1983; 48 FR 50733, Nov. 3, 1983; 49 FR 37775, Sept. 26, 1984; 50 FR 7341, Feb. 22, 1985; 50 FR 41155, Oct. 9, 1985; 54 FR 10328, Mar. 13, 1989; 54 FR 24905, June 12, 1989; 56 FR 9897, Mar. 8, 1991]

§ 21.710 Limitations on path lengths and channel loading.

(a) Frequencies in the following bands may not be used on transmission paths shorter than the indicated distances.

Frequency band (MHz)	Minimum path distances (in kilometers)
2,110 to 2,130.....	5
2,160 to 2,180.....	5
3,700 to 4,200.....	17
5,925 to 6,425.....	17
10,700 to 11,700.....	5

(b) Exception to the limits in paragraph (a) of this section may be made by the Commission when a showing (with supporting facts) is made that use of a frequency in conformance with the rule would entail excessive cost in construction or maintenance or would otherwise create substantial difficulties. The alternate frequency proposal must be shown to be consistent with good engineering practice under the circumstances. Stricter adherence to these limitations is expected in areas of general frequency congestion. The distance limitation does not apply to a frequency which is power split if one transmission path utilizing that frequency meets the minimum distance requirement.

(c) Except for video transmission, an application for an initial working channel over a given route will not be accepted for filing where the anticipated loading (within five years or other period subject to reasonable projection) is less than the minimum specified for the following frequency bands. Absent extraordinary circumstances, applications proposing additional frequencies over existing routes will not be granted unless it is shown that the traffic load will shortly exhaust the capacity of the existing equipment. For the 3700-4200 MHz band, all persons intending to utilize baseband frequencies above 7.3 MHz, or to operate with more than 1500 equivalent 4 kHz voice channels per radio channel, must submit evidence of coordination pursuant to § 21.100(d). Where no construction of radio facilities is requested, licensees must submit this evidence with their

Frequency band (MHz)	Minimum number voice channels (4 kHz or equivalent)	Minimum original data loading (in Mb/s)
3,700 to 4,200.....	900	10
5,925 to 6,425.....	900	10
10,700 to 11,700 (20 MHz bandwidth or less).....	240	5
10,700 to 11,700 (bandwidth more than 20 MHz).....	900	10

Where transmitters employing digital modulation techniques are designed to be used so that two may simultaneously operate on the same frequency over the same path, the minimum number of voice channels specified above is reduced from 900 to 500 per transmitter for the bands 3,700-4,200 MHz, 5,925-6,425 MHz, and 10,700-11,700 MHz.

[44 FR 60534, Oct. 19, 1979, as amended at 48 FR 16493, Apr. 18, 1983]

§ 94.15 Policy governing the assignment of frequencies.

(a) Frequencies in this service are assignable to provide the full-period service required in most private systems, and assignments shall be protected from interference in the manner and to the extent prescribed in this subpart. However, where a full-period service is not needed by the licensee, the same frequencies may be assigned to another applicant in the same area on a scheduled, time-sharing basis, provided that the applicant and existing licensees have filed a time-sharing agreement with the Commission.

(b) Except as provided in § 94.25(k), all applications for new or modified stations must contain an engineering analysis of the potential interference between the proposed facilities and previously authorized facilities and pending applications. The application must contain as supplemental information:

(1) A certification that based upon frequency engineering analysis, the potential interference will not exceed that prescribed by the interference criteria in § 94.63; or

(2) If the potential interference will exceed that prescribed by § 94.63, a statement to the effect that all parties affected have agreed to accept the higher level of interference.

(3) In either case, the application must contain the names of the licensees and the call signs of the stations that were considered in conducting the engineering analysis. Further, applicants and licensees will be expected to cooperate promptly and fully in the exchange of technical information necessary to performing frequency engineering analysis and, in the event of technical differences, cooperate in resolving these differences. Engineering analyses prepared pursuant to this section shall include the FCC ID number of the transmitter and the make and model numbers for all antennas the applicant proposes to use.

(c) Applicants for new facilities not forming a part of a previously authorized system shall select the frequency band having available frequencies where the assignable bandwidth is most consistent with the proposed communication requirements. Applications shall contain supplemental information showing the basis for frequency band selection, the basis for the bandwidth requested, and the proposed schedule for implementation of bandwidth utilization. Consistent with this policy, each applicant normally will be authorized one transmit frequency per path in each direction where full duplex operation is required. Additional frequencies per path may be authorized upon a showing that:

(1) The additional frequencies are required to accommodate the applicant's present and planned communications requirements; and technical factors preclude use of other bands. For the purposes of this requirement, technical factors to be considered in determining whether a frequency band is suitable for a proposed operation include: Reliability objectives of the applicant; propagation characteristics of the band; atmospheric condi-

tions in the proposed area of operation, such as rainfall and extreme temperature changes that may affect propagation outages; total path length of the proposed system; availability of radio equipment (but not its cost); and the relative availability of frequencies in the band where frequencies are requested and in the band where greater assignable bandwidth is available; or

(2) Expansion of previously authorized systems beyond the capacity originally contemplated is required. However, in no event will bandwidth greater than that associated with the transmit frequency as provided in § 94.65 be authorized. In addition, video systems employing more than 10 MHz bandwidth per channel will not be authorized on frequencies below 12,000 MHz; provided that stations authorized before August 1, 1975, not complying with the provisions of this paragraph may continue to be authorized.

(d) Except as provided in paragraph (h) of this section, applicants will be assigned the frequencies listed in § 94.65. Operation on other than the listed frequencies may be authorized where it is shown that the objectives or requirements of the interference criteria prescribed in § 94.63 could not otherwise be met to resolve the interference problems. Also, operation on other than listed frequencies within a single standard bandwidth may be authorized where amplitude modulation techniques are used. Finally, on frequencies, bands above 10,000 MHz, operations on multiple transmitting frequencies may be authorized on a case-by-case basis within a single standard bandwidth.

(e) Except as provided in paragraph (h) of this section, frequencies will be assigned in pairs for those stations employing full-duplex transmission, with one of the frequencies designated as the station transmit frequency and the other as the receive frequency. Provision is made in some bands for use of both paired and unpaired frequencies for one-way operations. Applicants requesting the use of paired frequencies in the 932-932.5 and 941-941.5 MHz bands for one-way master station transmissions to four or more remote stations will be assigned a frequency in the 932-932.5 MHz band, if

available, unless planned remotes are to be located beyond 48 kilometers from the master station. Except for the 932-932.5/941-941.5 MHz bands, assignment of a paired frequency for one-way operations will be made only upon a showing that spectrum efficiency will not be impaired and that unpaired frequencies are not available in other fixed spectrum. However, operation on frequencies not in accordance with the foregoing will be authorized only upon a showing that the interference criteria of this part could not be met or that an exception is required to prevent intrasystem interference.

(f) Except as provided in paragraph (h) of this section, applicants requiring more than one pair of frequencies at a single station location will be required to employ one end of the frequency band selected for all TRANSMIT frequencies at that location and the other end of the band for all RECEIVE frequencies at that location. However, exception to this requirement may be authorized upon a showing that the interference criteria of this part could not be met or that exception is required to prevent intrasystem interference.

(g) Except as provided in paragraph (h) of this section, applicants requiring multiple transmit frequencies employed on separate paths from a single station location will not normally be authorized more than four of the transmit frequencies available in the band. Further, master and remote stations using frequencies listed in § 94.65(a)(1) of this part will not normally be authorized more than four (12.5 kHz) frequencies or frequency pairs. During the initial filing window for the 932-932.5/941-941.5 MHz bands:

(1) An applicant may not apply for a frequency or frequency pair within a 25 mile radius of any location for which it has concurrently applied;

(2) Further, no party may have an ownership interest, direct or indirect, in two or more pending applications proposing sites within 25 miles of each other.

(h) Stations authorized before August 1, 1975, shall be exempt from

paragraphs (d), (e), (f), and (g) of this section.

(i) Licensees and applicants for the point-to-multipoint channels in the 10.6 GHz and 18 GHz bands are not subject to the provisions of paragraph (a) through (h) of this section.

(j) Applications filed pursuant to § 94.93 will not be subject to the provisions of paragraphs (a) through (h) of this section.

(Secs. 4(i), 301 and 303(r), Federal Communications Act of 1934, as amended, 47 U.S.C. 4(i), 301 and 303(r))

[40 FR 20928, May 13, 1975, as amended at 48 FR 50737, Nov. 3, 1983; 49 FR 36378, Sept. 17, 1984; 51 FR 41630, Nov. 18, 1986; 52 FR 29857, Aug. 12, 1987; 53 FR 11857, Apr. 11, 1988; 55 FR 9728, Mar. 15, 1990; 55 FR 10463, Mar. 21, 1990; 56 FR 34151, July 26, 1991]

§ 94.45 Changes in authorized station requiring modification.

(a) Modification of license or special temporary authority in accordance with § 94.43 is required for the following changes in authorized stations:

- (1) Any change in frequencies used;
- (2) Any change in antenna azimuth;
- (3) Any change in antenna beamwidth;
- (4) Any change in antenna or passive repeater location greater than 1 second or which involves a requirement for special aeronautical study;
- (5) Any change in antenna polarization;
- (6) Any change in antenna height;
- (7) Any change in the size of passive reflectors or repeaters associated with the facilities of an authorized station;
- (8) Any increase in emission bandwidth beyond that authorized;
- (9) Any change in the type of emission;
- (10) Any change in authorized effective radiated power in excess of 3dB (a 2-to-1 ratio);

(11) Substitution of equipment having different frequency tolerance.

(b) When the name of the licensee is changed (without changes in the ownership, control, or corporate structure), or when the mailing address is changed (without changing the authorized location of the fixed station) a formal application for modification of license is not required. However, the licensee shall notify the Commission promptly of these changes. The notice, which may be in letter form, shall contain the name and address of the licensee as they appear in the Commission's records, the new name and/or address as the case may be, the call signs and classes of all radio stations authorized to the licensee under this part and the radio service in which each station is authorized. The notice shall be sent to the Federal Communications Commission, Gettysburg, PA 17325 and a copy shall be maintained with the license of each station until a new license is issued.

[40 FR 20928, May 13, 1975, as amended at 52 FR 29857, Aug. 12, 1987]

Subpart C—Technical Standards

§ 94.61 Applicability.

(a) The technical standards of this subpart shall govern the issuance of authorizations for new stations and changes in authorized stations as specified in § 94.45. Except as provided for in § 94.65, licensees of transmitting equipment (including antennas) authorized prior to July 1, 1976, including their successors or assigns in business, will be permitted to utilize such equipment, in accordance with the standards indicated in § 94.92, provided that the operation of this equipment does not cause interference in excess of the levels specified in § 94.63 to another operational-fixed station or, in the 12,200-12,700 MHz band, to a direct broadcast satellite system. In case of such interference, the licensee of the non-conforming equipment may be required to install equipment which fully conforms to the technical standards of this subpart.

(b) Frequencies in the following bands are available for assignment to stations in the Private Operational-Fixed Service:

FREQUENCY BAND (MHz)

928-929	(19) and (20)
932 to 932.5	(32)

Service (part 21). Frequencies in these bands are paired with one another.
²⁴ Frequencies in the 942 to 944 MHz band are also shared with broadcast auxiliary stations (part 74).

(Secs. 4, 303, 48 Stat., as amended, 1066, 1082, 1083 (47 U.S.C. 154, 303, 307); secs. 4(i), 301 and 303(r), Federal Communications Act of 1934, as amended, 47 U.S.C. 4(i), 301 and 303(r))

[40 FR 20928, May 13, 1975]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 94.61, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 94.63 Interference protection criteria for operational fixed stations.

(a) Before filing an application for new or modified facilities under this part, the applicant must perform a frequency engineering analysis to assure that the proposed facilities will not cause interference to existing or previously applied-for stations in this service of a magnitude greater than that specified in the criteria set forth in paragraph (b) of this section, unless

(i) Due to co-channel sideband-to-sideband interference shall not exceed 5 pwpO;¹

(ii) Due to co-channel carrier-beat interference shall not exceed 50 pwpO.

(2) To short-haul analog systems employing frequency modulated radio and frequency division multiplexing to provide multiple voice channels, the allowable interference level per exposure:

(i) Due to co-channel sideband-to-sideband interference shall not exceed 25 pwpO except in the 952-960 MHz band interference into single link fixed relay and control stations shall not exceed 250 pwpO exposure.

(ii) Due to co-channel carrier-beat interference shall not exceed 50 pwpO except in the 952-960 MHz band interference into single link fixed relay and control stations shall not exceed 1000 pwpO per exposure.

(3) FM-TV. In analog systems employing frequency modulated radio that is modulated by a standard, tele-

ods employed to perform path calculations shall follow generally acceptable good engineering practices. Procedures as may be developed by the Electronics Industries Association (EIA), the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the American National Standards Institute (ANSI) or any other recognized authority will be acceptable to the Commission.

(3) Except as provided in §§ 94.90 and 94.91, where the applicant's proposed facilities are of a type not included in paragraph (b) of this section or where the development of the carrier-to-interference (C/I) ratio is not covered by generally acceptable procedures, or where the applicant does not wish to develop the carrier-to-interference ratio, the applicant shall, in the absence of criteria or a developed C/I ratio, employ the following C/I protection ratios:

(i) Co-channel interference: Both sideband and carrier-beat, applicable to all bands; the existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 90 dB except in the 952-960 MHz band where it shall be 75 dB.

(ii) Adjacent channel interference: Applicable to all bands; the existing or previously authorized system shall be afforded a carrier to interfering signal protection ratio of at least 56 dB.

(4) Applicants for frequencies listed in § 94.65(a)(1) shall make the following showings that protection criteria have been met over the entire service area of existing systems. Such showings may be made by the applicant or may be satisfied by a statement from a Frequency Advisory Committee. For frequencies available to more than one service, the Frequency Advisory Committee shall affirmatively show that coordination with similar Committees for the other services has been accomplished.

(i) For multiple address stations in the 928-929/952-960 MHz bands, a statement that the proposed system complies with the following co-channel separations from all existing stations and pending applications:

Fixed-to-fixed 145 Km (90 miles)
Fixed-to-mobile 113 Km (70 miles)
Mobile-to-mobile 81 Km (50 miles)

Multiple address systems employing only remote stations will be treated as mobile for the purposes of determining the appropriate separation. For mobile operation, the mileage is measured from the reference point specified on the license application.

(ii) For multiple address stations in the 932-932.5/941-941.5 MHz bands, a statement that the proposed system complies with the following co-channel separation from all existing stations and pending applications:

Fixed-to-fixed 113 Km (70 miles)

(iii) In cases where the geographic separation standard in paragraph (d)(4)(i) of this section is not followed, an engineering analysis will be submitted to show the coordination of the proposed assignment with existing systems located closer than those standards. The engineering analyses will include:

(A) Specification of the interference criteria and system parameters used in the interference study.

(B) Nominal service areas of each system included in the interference analysis.

(C) Modified service areas resulting from the proposed system. The propagation models used to establish the service boundary limits must be specified and any special terrain features considered in computing the interference impact should be described.

(D) A statement that all parties affected have agreed to the engineering analysis and will accept the calculated levels of interference.

(5) Multiple address frequencies in the 956 MHz band may be assigned for use by mobile master stations on a primary basis. Multiple address frequencies in the 952 MHz band may be assigned for use by mobile master stations on a case-by-case basis. Mobile operation in the 952 MHz band shall be on a secondary basis to fixed operations.

(6) Each application for new or modified nodal station on channels numbered 4A, 4B, 7, 9, and 19/20 in the 10.6 GHz band and all point-to-multipoint channels in the 18 GHz band shall demonstrate that all existing co-channel stations are at least 56 kilometers from the proposed nodal

station site. Applicants for these channels must certify that all licensees and applicants for stations on the adjacent channels within 56 kilometers of the proposed nodal station have been notified of the proposed station and do not object. Alternatively, or if one of the affected adjacent channel interests does object, the applicant may show that all affected adjacent channel parties are provided a C/I protection ratio of 0 dB. An applicants proposing to operate at an AAT greater than 91 meters must reduce its EIRP in accordance with the following table; however, in no case shall EIRP exceed 70 dBm on the 10.6 GHz channels.

EIRP	
AAT (in meters): dBm	
Above 300.....	+38
251 to 300.....	41
201 to 250.....	43
151 to 200.....	49
101 to 150.....	55
100 and below.....	85

(7) Each application for new or modified nodal station on channels numbered 21, 22, 23, and 24 in the 10.6 GHz band shall include an analysis of the potential for harmful interference to all other licensed and previously applied for co-channel and adjacent channel station located within 80 kilometers of the location of the proposed station. The criteria contained in § 94.63(d)(3) shall be used in this analysis. Applicants must certify that copies of this analysis have been served on all parties which might reasonably be expected to receive interference above the levels set out in § 94.63(d)(3) within 5 days of the date the subject application is filed with the Commission.

(e) An applicant filing for a modification of an existing station under the provisions of § 94.45 need not perform the interference protection analyses required by this section if the only modifications made to the station are one or more of the following:

(1) Substitution of transmitting equipment having equal or tighter frequency tolerance.

(2) Any decrease in antenna primary lobe beamwidth which is accompanied by a corresponding decrease in anten-

na input power so as to not increase the effective radiated power in excess of a 2 to 1 ratio.

(3) Any decrease in antenna height or transmitter output power.

(f) Effective August 1, 1985, when an operational-fixed station which conforms to the technical standards of this subpart (or, in the case of the 12,200-12,700 MHz band, a direct broadcast satellite station) receives or will receive interference in excess of the levels specified in this section as a result of an existing licensee's use of non-conforming equipment authorized between July 20, 1961 and July 1, 1976, and the interference would not result if the interfering station's equipment complied with the current technical standards, the licensee of the non-conforming station must take whatever steps are necessary to correct the situation up to the point of installing equipment which fully conforms to the technical standards of this subpart. In such cases, if the engineering analysis performed in accordance with § 94.15(b) demonstrates that (1) the conforming station would receive interference from a non-conforming station in excess of the levels specified in this section and (2) the interference would be eliminated if the non-conforming equipment were replaced with equipment which complies with the standards of this subpart, the licensee (or prospective licensee) of the station which would receive interference shall provide written notice of the potential interference to both the non-conforming licensee and the Commission's office in Gettysburg, PA. The non-conforming licensee shall make all required equipment changes within 180 days from the date of official Commission notice informing the licensee that it must upgrade its equipment, unless an alternative solution has been agreed to by all parties involved in the interference situation. If a non-conforming licensee fails to make all required changes within the specified period of time, the Commission may require the licensee to suspend operation until the changes are completed.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1082, 1083 (47 U.S.C. 154, 303, 307); secs. 4(i), 301 and 303(r), Federal Communications Act

of 1934, as amended. 47 U.S.C. 4(i), 301 and 303(r))

[40 FR 20928, May 13, 1975]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 94.63, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 94.65 Frequencies.

Frequencies normally available for assignment in this service are set forth with applicable limitations in the following tables:

(a) 928-960 MHz—(1) *Multiple address system frequencies.* Multiple address system (MAS) frequencies are available for the point-to-multipoint transmission of a licensee's products or services, excluding video entertainment material, to a licensee's customer or for its own internal communications. The paired frequencies listed in this section shall be used for two-way interrogate/response communications between a master station and remote stations. Each master station operating on these frequencies is required to serve a minimum of four separate active remote stations. Ancillary one-way communications on paired frequencies are permitted on a case-by-case basis. Ancillary communications between interrelated master stations are permitted on a secondary basis. The normal channel bandwidth assigned will be 12.5 kHz. Upon adequate justification, however, channels with bandwidths up to 50 kHz may be authorized. Tables 2, 4, and 6 list frequencies with 25 kHz bandwidth channels. When licensed for a larger bandwidth, the system still is required to use equipment which meets the ± 0.00015 percent tolerance requirement. (See § 94.67). Systems licensed for frequencies in these MAS bands prior to August 1, 1975 may continue to operate as authorized until June 11, 1996 at which time they must comply with current MAS operations based on the 12.5 kHz channelization set forth in this paragraph. Systems licensed between August 1, 1975 and January 1, 1981, inclusive, were permitted to operate as authorized until January 1, 1991, at which time they were required to comply with the grandfathered 25 kHz standard bandwidth and channelization requirements set forth in this

paragraph. Systems licensed between August 1, 1975 and January 1, 1981, inclusive, were permitted to operate as authorized until January 1, 1991, at which time they were required to comply with the grandfathered 25 kHz standard bandwidth and channelization requirements set forth in this paragraph. Systems originally licensed after January 1, 1981, and on or before May 11, 1988 with bandwidths of 25 kHz and above must justify their need for spectrum in excess of the 12.5 kHz standard at their first renewal period on or after June 1, 1996.

(i) *General Access Pool:* Frequencies listed in this paragraph are available to all persons eligible under part 94 for use in multiple address radio systems. Except as noted, however, the frequencies may be used by eligibles in the Power Radio Service only if the frequencies in § 94.65(a)(1)(ii) of this part are exhausted in the particular geographic area. The frequencies are also available for shared use by part 22 Public Land Mobile Service users if frequencies listed in § 22.501(g) of this chapter are exhausted in the particular geographic area. Applications for use of these frequencies under part 22 shall be subject to part 94 requirements.

TABLE 1—PAIRED FREQUENCIES (MHz)
(12.5 kHz bandwidth)

Remote transmit	Master transmit
928.00625	952.00625
928.01875	952.01875
928.03125	952.03125
928.04375	952.04375
928.05625	952.05625
928.06875	952.06875
928.08125	952.08125
928.09375	952.09375
928.10625	952.10625
928.11875	952.11875
928.13125	952.13125
928.14375	952.14375
928.15625	952.15625
928.16875	952.16875
928.18125	952.18125
928.19375	952.19375
928.20625	952.20625
928.21875	952.21875
928.23125	952.23125
928.24375	952.24375
928.25625	952.25625
928.26875	952.26875
928.28125	952.28125
928.29375	952.29375
928.30625	952.30625
928.31875	952.31875

TABLE 1—PAIRED FREQUENCIES (MHz)—Continued
(12.5 kHz bandwidth)

Remote transmit	Master transmit
928.33125	952.33125
928.34375	952.34375

UNPAIRED FREQUENCIES (MHz)¹
(12.5 kHz bandwidth)

tions for use of these frequencies under part 22 of this chapter shall be subject to part 94 of this chapter requirements.

TABLE 3—PAIRED FREQUENCIES (MHz)
(12.5 kHz bandwidth)

Remote transmit	Master transmit

TABLE 4—PAIRED FREQUENCIES (MHZ)—Continued
(25 KHZ BANDWIDTH)

Remote transmit	Master transmit
928.7375	952.7375
928.7625	952.7625
928.7875	952.7875
928.8125	952.8125
928.8375	952.8375

(iii) Frequencies listed in this paragraph are available for shared use by general access pool users for multiple address operations if frequencies listed in paragraph (a)(1)(i) of this section are exhausted in the particular geographic area. The frequencies are also available to eligibles in the power pool provided there are no other frequencies available for the type of operation contemplated. The frequencies in this pool may be assigned for paired or unpaired operation. If paired, the corres-

(iv) Frequencies listed in this paragraph are shared with stations in the Public Land Mobile Service (part 22).

TABLE 7—PAIRED FREQUENCIES
(12.5 KHZ BANDWIDTH)

Remote transmit	Master transmit
932.00625	941.00625
932.01875	941.01875
932.03125	941.03125
932.04375	941.04375
932.05625	941.05625
932.06875	941.06875
932.08125	941.08125
932.09375	941.09375
932.10625	941.10625
932.11875	941.11875
932.13125	941.13125
932.14375	941.14375
932.15625	941.15625
932.16875	941.16875
932.18125	941.18125
932.19375	941.19375
932.20625	941.20625
932.21875	941.21875
932.23125	941.23125

(2) Fixed point-to-point frequencies.
(i)

TABLE 8—PAIRED FREQUENCIES
[25 kHz bandwidth]

Transmit (or receive)	Receive (or transmit)
932.5125	941.5125
932.5375	941.5375
932.5625	941.5625
932.5875	941.5875
932.6125	941.6125
932.6375	941.6375
932.6625	941.6625
934.6375	943.6375
934.6625	943.6625
934.6875	943.6875
934.7125	943.7125
934.7375	943.7375
934.7625	943.7625
934.7875	943.7875

(ii) Table 9—(50 kHz bandwidth).

Paired Frequencies

Transmit (receive) (MHz)	Receive (transmit) (MHz)
932.7000	941.7000
932.7500	941.7500
934.8000	943.8000
956.65	953.05
956.75	953.15
956.85	953.25
956.95	953.35
957.05	953.45
957.25	953.65
957.35	953.75
957.45	953.85
957.65	954.05
957.75	954.15
957.85	954.25
958.05	954.45
958.15	954.55
958.25	954.65
958.45	954.85
958.55	954.95
958.65	955.05
958.85	955.25
958.95	955.35
959.05	955.45
959.25	955.65
959.35	955.75
959.45	955.85
959.55	955.95
959.65	956.05

(iii)

TABLE 10—PAIRED FREQUENCIES
[100 kHz bandwidth]

Transmit (receive) (MHz)	Receive (transmit) (MHz)
932.8250	941.8250
932.9250	941.9250
933.0250	942.0250
934.5250	943.5250
934.6250	943.6250
934.7250	943.7250
956.6	953.0
956.7	953.1
956.8	953.2
956.9	953.3
957.0	953.4
957.1	953.5
957.2	953.6
957.3	953.7
957.4	953.8
957.5	953.9
957.6	954.0
957.7	954.1
957.8	954.2
957.9	954.3
958.0	954.4
958.1	954.5
958.2	954.6
958.3	954.7
958.4	954.8
958.5	954.9
958.6	955.0
958.7	955.1
958.8	955.2
958.9	955.3
959.0	955.4
959.1	955.5
959.2	955.6
959.3	955.7
959.4	955.8
959.5	955.9
959.6	956.0
959.7	956.1

(iv)

TABLE 11—PAIRED FREQUENCIES
[200 kHz bandwidth]

Transmit (receive) (MHz)	Receive (transmit) (MHz)
933.1750	942.1750
933.3750	942.3750
933.5750	942.5750
933.7750	942.7750
933.9750	942.9750
934.1750	943.1750
934.3750	943.3750
957.15	953.55
957.55	953.95
957.95	954.35
958.35	954.75
958.75	955.15
959.15	955.55

(b) 1850-1990 MHz.

(1) 10 MHz maximum bandwidth.

PAIRED FREQUENCIES

Transmit (or receive)	Receive (or transmit)
1855	1935
1865	1945
1875	1955
1885	1965
1895	1975
1905	1985

UNPAIRED FREQUENCIES

¹ 1915
¹ 1925

¹ Available for systems employing one-way transmission.

(2) 5 MHz maximum bandwidth.

PAIRED FREQUENCIES

Transmit (or receive)	Receive (or transmit)
1860	1940
1870	1950
1880	1960
1890	1970
1900	1980

(c) 2130-2150 MHz; 2180-2200 MHz.
800 kHz maximum bandwidth,
unless noted.

PAIRED FREQUENCIES

2130-2150 MHz Transmit (or receive)	2180-2200 MHz Receive (or transmit)
2130.8	2180.8
2131.6	¹ 2181.6
2132.4	2182.4
2133.2	¹ 2183.2
2134.0	2184.0
2134.8	¹ 2184.8
2135.6	2185.6
2136.4	¹ 2186.4
2137.2	2187.2
2138.0	¹ 2188.0
2138.8	2188.8
2139.6	¹ 2189.6
2140.4	2190.4
2141.2	¹ 2191.2
2142.0	2192.0
2142.8	¹ 2192.8
2143.6	2193.6
2144.4	¹ 2194.4
2145.2	2195.2
2146.0	¹ 2196.0
2146.8	2196.8
2147.6	¹ 2197.6
2148.4	2198.4

PAIRED FREQUENCIES—Continued

2130-2150 MHz Transmit (or receive)	2180-2200 MHz Receive (or transmit)
2149.2	2199.2

¹ Consideration will be given on a case-by-case basis to assigning these frequency pairs to systems employing 1600 kHz bandwidth transmissions.

(d) 2150-2160 MHz: Specific frequency of operation to be set forth in authorization. Omnidirectional transmission only may be authorized, subject to providing protection from harmful interference to previously authorized stations in this service and in other services sharing this band.

(e) 2450-2500 MHz:

(1) This band is shared with other communications services and is not subject to protection from interference from industrial, scientific, and medical devices operating on 2450 MHz.

(2) Stations licensed in this band under this part prior to (effective date of rules) are grandfathered and may continue their authorized operations. Stations licensed in the 2483.5-2500 MHz portion of the band as of July 25, 1985, or on a subsequent date as a result of submitting an application on or before July 25, 1985, are grandfathered, and may continue operations, subject only to license renewal, on a co-primary basis with the Radiodetermination Satellite Service.

(3) 625 KHz bandwidth channels. The normal bandwidth authorized will be 625 KHz. Upon adequate justification, additional contiguous channels may be authorized to provide up to a 2500 kHz bandwidth.

PAIRED FREQUENCIES (MHz)

Transmit (or receive)	Receive (or transmit)
2450.3125	2467.5625
2450.9375	2468.1875
2451.5625	2468.8125
2452.1875	2469.4375
2452.8125	2470.0625
2453.4375	2470.6875
2454.0625	2471.3125
2454.6875	2471.9375
2455.3125	2472.5625
2455.9375	2473.1875
2456.5625	2473.8125
2457.1875	2474.4375

PAIRED FREQUENCIES (MHz)—Continued

Transmit (or receive)	Receive (or transmit)
2457.8125	2475.0625
2458.4375	2475.6875
2459.0625	2476.3125
2459.6875	2476.9375
2460.3125	2477.5625
2460.9375	2478.1875
2461.5625	2478.8125
2462.1875	2479.4375
2462.8125	2480.0625
2463.4375	2480.6875
2464.0625	2481.3125
2464.6875	2481.9375
2465.3125	2482.5625
2465.9375	2483.1875

The 2466.25-2467.25 MHz portion of this band is an unchanneled band between paired transmit and receive frequencies. Use of frequencies in this band with up to 1 MHz authorized bandwidth will be considered on a case-by-case basis and will be subject to the technical standards for the 2450-2500 MHz band as outlined in this part. Authorization will be made on a secondary basis only.

(f) 2500-2690 MHz: Operational-fixed stations may be authorized on the following frequencies:

Frequencies (MHz)

2686.9375
2687.9375
2688.5625
2688.6875
2688.9375
2689.5625
2689.6875

Operational-Fixed stations authorized in this band as of July 16, 1971, which do not comply with the provisions of this part may continue to operate on the frequencies assigned on a coequal basis with other stations operating in accordance with the Table of Frequency allocations. Requests for subsequent license renewals or modifications for such stations will be considered. However, expansion of systems comprised of such stations will not be permitted, except pursuant to the provisions of this part. No new licenses will be issued under this part until specific operating parameters are established for this band.

(g) 6525-6875 MHz.

(1) 800 kHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz):	Receive (or transmit) (MHz)
6825.5	6870.5
6826.3	6871.3
6827.1	6872.1
6827.9	6872.9
6828.7	6873.7
6829.5	6873.7

(2) 1,600 kHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz):	Receive (or transmit) (MHz)
6825.9	6870.9
6827.5	6872.5
6829.1	6874.1

(3) 5 MHz maximum bandwidth.

PAIRED FREQUENCIES

Transmit (or receive)	Receive (or transmit)
6550.0	6730.0
6560.0	6740.0
6580.0	6750.0
6600.0	6760.0
6610.0	6770.0
6620.0	6780.0
6630.0	6790.0
6640.0	6800.0
6650.0	6810.0
6660.0	6820.0
6670.0	6830.0
6680.0	6840.0
6690.0	6850.0
6700.0	6860.0
6710.0	6870.0

¹ Use of this frequency is authorized on a non-interference basis to broadcast operations in the band 6875-7125 MHz

(4) 10 MHz maximum bandwidth.

PAIRED FREQUENCIES

Transmit (or receive)	Receive (or transmit)
6545 ¹	6715
6555 ¹	6725
6565	6735
6585	6745
6595	6755
6605	6765
6615	6775

PAIRED FREQUENCIES—Continued

Transmit (or receive)	Receive (or transmit)
6625	6785
6635	6795
6645	6805
6655	6815
6665	6825
6675	6835
6685	6845
6695	6855
6705	6865
6535 ²	6575

¹ These frequencies may be assigned for unpaired use.
² Available only for emergency restoration, maintenance bypass, or other temporary fixed purposes. Such uses are authorized on a non-interference basis to other frequencies in this band. Interference analysis required by § 94.63(a) does not apply to this frequency pair.

UNPAIRED FREQUENCIES

6720²

² This frequency may be assigned for unpaired use.

(h) 12,200-12,700 MHz: The Commission has allocated the 12.2-12.7 GHz band for use by the broadcasting-satellite service. Operational-fixed stations authorized after September 9, 1983 shall be licensed on a noninterference basis and shall be required to make any and all adjustments necessary to prevent interference to operating domestic broadcasting-satellite systems. (Section 94.93 contains special provisions for stations authorized in the band on or before September 9, 1983). Notwithstanding any other provisions, no operational-fixed stations shall be permitted to cause interference to broadcasting-satellite stations of other countries operating in accordance with the Region 2 plan for the broadcasting-satellite service established at the 1983 RARC.

(i) 10,550-10,680 MHz. (1) The following frequencies are available for point-to-multipoint digital terminations systems:

Channel No.	Nodal station	User station
	Frequency band limits (MHz)	Frequency band limits (MHz)
4A	10,580.0-10,582.5	10,645.0-10,647.5
4B	10,582.5-10,585.0	10,647.5-10,650.0
19	10,585.0-10,587.5	10,650.0-10,652.5
20	10,587.5-10,590.0	10,652.5-10,655.0
21	10,590.0-10,592.5	10,655.0-10,657.5
22	10,592.5-10,595.0	10,657.5-10,660.0
23	10,595.0-10,597.5	10,660.0-10,662.5

Channel No.	Nodal station	User station
	Frequency band limits (MHz)	Frequency band limits (MHz)
24	10,597.5-10,600.0	10,662.5-10,665.0
7	10,605.0-10,607.5	10,670.0-10,672.5
9	10,610.0-10,612.5	10,675.0-10,677.5

(i) Each station will be limited to one frequency pair per SMSA. An additional channel pair may be assigned upon a showing that the service to be provided will fully utilize the spectrum requested. The channel pair may be subdivided as desired by the licensee.

(ii) A frequency pair may be assigned to more than one licensee in the same SMSA or service area as long as the interference protection criteria of § 94.63 are met.

(2) The following frequencies are available for point-to-point operations:

(i) 2.5 MHz bandwidth.

Transmit (receive) MHz	Receive (transmit) MHz
10,551.25	10,616.25
	10,553.75
	10,618.75
10,556.25	10,621.25
	10,558.75
	10,623.75

(ii) 1.25 MHz bandwidth.

Transmit (receive) MHz	Receive (transmit) MHz
10,560.625	10,625.625
	10,561.875
	10,626.875
10,563.125	10,628.125
	10,564.375
	10,629.375

(3) 3.75 MHz authorized bandwidth channels, 65 MHz separation:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
10551.875	10616.875
10555.625	10620.525
10559.375	10624.375
10563.125	10628.125

(4) 2.50 MHz authorized bandwidth channels, 65 MHz separation:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
10561.250	10626.250
10563.750	10628.750

(j) 17700-19700 MHz

NOTE.—Stations authorized as of September 9, 1983 to use frequencies in this band may, upon proper application, continue to be authorized for such operations.

(1) 2 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18141.0	n/a

(2) 5 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
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340 MHz Separation

18762.5	19102.5
18767.5	19107.5
18772.5	19112.5
18777.5	19117.5
18782.5	19122.5
18787.5	19127.5
18792.5	19132.5
18797.5	19137.5
18802.5	19142.5
18807.5	19147.5
18812.5	19152.5
18817.5	19157.5

(3) 6 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
--------------------------	--------------------------

216 MHz Separation

18145.0	n/a
18151.0	18367.0
18157.0	18373.0
18163.0	18379.0
18169.0	18385.0
18175.0	18391.0
18181.0	18397.0
18187.0	18403.0
18193.0	18409.0
18199.0	18415.0
18205.0	18421.0
18211.0	18427.0
18217.0	18433.0
18223.0	18439.0

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18229.0	18445.0
18235.0	18451.0
18241.0	18457.0
18247.0	18463.0
18253.0	18469.0
18259.0	18475.0
18265.0	18481.0
18271.0	18487.0
18277.0	18493.0
18283.0	18499.0
18289.0	18505.0
18295.0	18511.0
18301.0	18517.0
18307.0	18523.0
18313.0	18529.0
18319.0	18535.0
18325.0	18541.0
18331.0	18547.0
18337.0	18553.0
18343.0	18559.0
18349.0	18565.0
18355.0	18571.0
18361.0	18577.0

(4) 10 MHz maximum authorized bandwidth channels:

Transmit (receive) (MHz)	Receive (transmit) (MHz)
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1560 MHz Separation

17705.0	19265.0
17715.0	19275.0
17725.0	19285.0
17735.0	19295.0
17745.0	19305.0
17755.0	19315.0
17765.0	19325.0
17775.0	19335.0
17785.0	19345.0
17795.0	19355.0
17805.0	19365.0
17815.0	19375.0
17825.0	19385.0
17835.0	19395.0
17845.0	19405.0
17855.0	19415.0
17865.0	19425.0
17875.0	19435.0
17885.0	19445.0
17895.0	19455.0
17905.0	19465.0
17915.0	19475.0
17925.0	19485.0
17935.0	19495.0
17945.0	19505.0
17955.0	19515.0
17965.0	19525.0
17975.0	19535.0
17985.0	19545.0
17995.0	19555.0
18005.0	19565.0
18015.0	19575.0
18025.0	19585.0
18035.0	19595.0
18045.0	19605.0

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18055.0	19815.0
18065.0	19825.0
18075.0	19835.0
18085.0	19845.0
18095.0	19855.0
18105.0	19865.0
18115.0	19875.0
18125.0	19885.0
18135.0	19895.0
340 MHz Separation	
18585.0	18925.0
18595.0	18935.0
18605.0	18945.0
18615.0	18955.0
18625.0	18965.0
18635.0	18975.0
18645.0	18985.0
18655.0	18995.0

Transmit (receive) (MHz)	Receive (transmit) (MHz)
18130.0	19890.0
340 MHz Separation	
18590.0	18930.0
18610.0	18950.0
18630.0	18970.0
18650.0	18990.0
18670.0	19010.0
18690.0	19030.0
18710.0	19050.0
18730.0	19070.0
18750.0	19090.0
18770.0	19110.0
18790.0	19130.0
18810.0	19150.0

(6) 40 MHz maximum authorized bandwidth channels.

Channel No.	Node station	User station
	Frequency band (MHz) limits	Frequency band (MHz) limits
25	18,820-18,830	19,160-19,170
26	18,830-18,840	19,170-19,180
27	18,840-18,850	19,180-19,190
28	18,850-18,860	19,190-19,200
29	18,860-18,870	19,200-19,210

(i) Each station will be limited to one frequency pair per SMSA. Additional channel pairs may be assigned upon a showing that the service to be provided will fully utilize the spectrum requested. A channel pair may be subdivided as desired by the licensee.

(ii) A frequency pair may be assigned to more than one licensee in the same SMSA or service area so long as the interference protection criteria of § 94.63 are met.

(k) 31.0 to 31.3 GHz. These frequencies are shared on a coequal basis with other stations in the fixed and mobile services (see parts 21, 74, 78 and 95). No interference protection is afforded to fixed or mobile stations operating in this band.

(1) 25 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,012.5	31,162.5
31,037.5	31,187.5
31,062.5	31,212.5
31,087.5	31,237.5
31,112.5	31,262.5
31,137.5	31,287.5

(2) 50 MHz authorized bandwidth channels, 150 MHz separation.

Transmit (receive) (MHz)	Receive (transmit) (MHz)
31,025.0	31,175.0
31,075.0	31,225.0
31,125.0	31,275.0

(l) Except as provided for in § 94.91 and § 94.65(k), frequencies in bands authorized above 21.2 GHz are not paired and will be as specified in the authorization.

(m) 6425 to 6525 MHz—Mobile. Paired and un-paired operations per-

mitted. Use of this spectrum for direct delivery of video programs to the general public or multi-channel cable distribution is not permitted. This band is co-equally shared with mobile stations licensed pursuant to parts 21, 74 and 78 of the Commission's Rules. Stations not intended to be operated while in motion will be licensed under the provision of § 94.25(d). The following channel plans apply.

(1) 1 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz):	Receive (or transmit) (MHz)
6425.5	6575.5
6450.5	6500.5

(2) 8 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz):	Receive (or transmit) (MHz)
6430.0	6480.0
6438.0	6488.0
6446.0	6506.0
6455.0	6505.0
6463.0	6513.0
6471.0	6521.0

(3) 25 MHz maximum authorized bandwidth channels.

Transmit (or receive) (MHz):	Receive (or transmit) (MHz)
6437.5	6487.5
6462.5	6512.5

(Secs. 4, 303, 307, 48 Stat., as amended, 1066, 1082, 1083 (47 U.S.C. 154; 303, 307); secs. 4(i), 301 and 303(r), Federal Communications Act of 1934, as amended, 47 U.S.C. 4(i), 301 and 303(r))

[40 FR 20928, May 13, 1975]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 94.65, see the List of CFR Sections Affected in the Finding Aids section of this volume.